

I claim:

1 1. A system for exchanging information between a buyer and at least one of a  
2 plurality of sellers using computers that communicate over a distributed network,  
3 the system comprising:  
4 a buyer's intelligent agent for receiving information regarding at least one  
5 selected item from at least one of a plurality of seller's inter-agents and for sending  
6 information regarding said selected item to said least one seller's inter-agents, said  
7 selected item being one of a group of individual product items and individual service  
8 items,  
9 at least one buyer's input device in communication with said buyer's inter-agent,  
10 said buyer's input device for identifying a list of at least two sellers of said selected  
11 item,  
12 said at least one of a plurality of seller's inter-agents for receiving information  
13 regarding said selected item from said buyer's inter-agent and for sending information  
14 regarding said selected item to said buyer's inter-agent, each of said plurality of sellers'  
15 agents representing a seller of said selected item, and  
16 wherein, when said list of sellers is received by said buyer's inter-agent, said  
17 buyer's inter-agent and said seller's inter-agents representing said at least two sellers  
18 engage in an exchange of information regarding said selected item.

1 2. The system for exchanging information of claim 1, wherein:  
2 said at least one of a plurality of seller's intelligent agents comprises at least two

3 of said plurality of seller's intelligent agents.

1 3. The system for exchanging information of claim 1, wherein:

2 said buyer's inter-agent is autonomous.

1 4. The system for exchanging information of claim 1, wherein:

2 at least one of said seller's inter-agents is autonomous.

1 5. The system for exchanging information of claim 1, wherein:

2 said buyer's inter-agent transmits a list of buyer's minimally acceptable  
3 specifications to said seller's intelligent agents, and

4 said seller's intelligent agents transmit responses to said buyer's inter-agent  
5 stating the availability of said selected item with said buyer's minimally acceptable  
6 specifications from the sellers represented by said seller's intelligent agents.

1 6. The system for exchanging information of claim 1, wherein:

2 said at least one selected item comprises a bundle of items wherein each of said  
3 at least two sellers is a seller of each of said items of said bundle.

1 7. The system for exchanging information of claim 1, wherein:

2 said at least one selected item comprises a bundle of items, each item of said  
3 bundles of items is available from each of said at least two sellers, and each of said

4 items of said bundle satisfies a list of buyer's minimally acceptable specifications.

1 8. The system for exchanging information of claim 1, wherein:

2 at least one item of said bundle includes at least one parts, and said parts are  
3 available from said at least two sellers, and said parts satisfy said list of buyer's  
4 minimally acceptable specifications.

1 9. The system for exchanging information of claim 1, wherein:

2 said at least one selected item comprises a bundle of items.

1 10. The system for exchanging information of claim 1, wherein:

2 said information regarding said selected item comprises at least one promotion  
3 from at least one of said sellers.

1 11. The system for exchanging information of claim 1, wherein:

2 said information regarding said selected item comprises at least one contract  
3 contingency from at least one of said sellers authorizing said seller to pay said buyer a  
4 penalty if said seller elects to sell said selected item to another buyer.

1 12. The system for exchanging information of claim 1, wherein:

2 said buyer's inter-agent selects one of a group of evolutionary computation  
3 programs to exchange said information.

1 13. The system for exchanging information of claim 12, wherein:  
2 said group of evolutionary computation programs comprises neural networks.

1 14. The system for exchanging information of claim 12, wherein:  
2 said group of evolutionary computation programs comprises genetic  
3 programming.

1 15. The system for exchanging information of claim 12, wherein:  
2 said group of evolutionary computation programs comprises genetic algorithms.

1 16. The system for exchanging information of claim 1, wherein:  
2 said sellers' intelligent agent selects one of a group of evolutionary computation  
3 programs to exchange said information.

1 17. The system for exchanging information of claim 16, wherein:  
2 said group of evolutionary computation programs comprises neural networks.

1 18. The system for exchanging information of claim 16, wherein:  
2 said group of evolutionary computation programs comprises genetic  
3 programming.

1 19. The system for exchanging information of claim 16, wherein:

2 said group of evolutionary computation programs comprises genetic algorithms.

1 20. The system of claim 1, further comprising:

2 at least one buyer's analytical agent for mining data from at least one of a  
3 plurality of market databases, said buyer's analytical agent in communication with said  
4 buyer's inter-agent,

5 wherein, when said buyer's analytical agent receives a set of parameters  
6 relating to said selected item, said buyer's analytical agent mines said data from said  
7 databases to identify said list of at least two sellers of said selected item.

1 21. The system of claim 20, wherein:

2 said list of at least two sellers includes a ranking of said identified sellers  
3 according to satisfaction criteria related to said set of parameters.

1 22. The system of claim 20, wherein:

2 said buyer's analytical agent selects one of a group of evolutionary computation  
3 programs to perform said mining.

1 23. The system of claim 22, wherein:

2 said group of evolutionary computation programs comprises neural networks.

1 24. The system of claim 22, wherein:

2 said group of evolutionary computation programs comprises genetic  
3 programming.

1 25. The system of claim 22, wherein:

2 said group of evolutionary computation programs comprises genetic algorithms.

1 26. The system of claim 20, wherein:

2 said mining data comprises filtering.

1 27. The system of claim 20, wherein:

2 said plurality of market databases includes at least one new items similar to said  
3 selected item, and

4 said buyer's analytical agent ranks said new items by interest to customers of  
5 similar to a buyer associated with said buyer's inter-agent.

1 28. The system of claim 1, further comprising:

2 at least one seller's analytical agent for analyzing seller competitors, said  
3 seller's analytical agent in communication with said at least one of a plurality of seller's  
4 inter-agents,

5 wherein, when said seller's analytical agent receives an indication of a buyer's  
6 interest in said selected item, said seller's analytical agent mines data from at least one

of a plurality of market databases for identifying candidate seller competitors and for creating a report on the competitive strength of said candidate seller competitors related to prospective sales of said selected item to said buyer.

29. The system of claim 28, wherein:

said indication of a buyer's interest in said selected item includes a list of at least one parts comprising said selected item, and said indication of a buyer's interest further including specifications for each said part minimally acceptable to said buyer.

30. A system for information collaboration between a buyer and at least one of a plurality of sellers using computers that communicate over a distributed network, the system comprising:

a buyer's inter-agent for receiving information regarding at least one selected item from at least one of a plurality of seller's inter-agents and for sending information regarding said selected item to said seller's inter-agents, said selected item being one of a product or service, and

said at least one of a plurality of seller's inter-agents for receiving information regarding said selected item from said buyer's inter-agent and for sending information regarding said selected item to said buyer's inter-agent,

wherein, when said buyer's inter-agent transmits a set of minimally acceptable buyer's specifications for said selected item to said plurality of seller's inter-agents, said at least one of said plurality of seller's inter-agents transmits to said buyer's inter-

agent a set of seller's specifications available from a seller for said selected item that  
comply with said set of minimally acceptable buyer's specifications, and  
wherein, when said buyer's inter-agent transmits a set of minimally acceptable  
buyer's transaction specifications for said selected item to said plurality of seller's inter-  
agents, said at least one of said plurality of seller's inter-agents transmits to said  
buyer's inter-agent a set of seller's transaction specifications available from a seller for  
said selected item that comply with said set of minimally acceptable buyer's transaction  
specifications.

31. A system for information collaboration between a buyer and at least one of a  
plurality of sellers using computers that communicate over a distributed network,  
the system comprising:

a buyer's inter-agent for receiving information regarding at least one selected  
item from at least one of a plurality of seller's inter-agents and for sending information  
regarding said selected item to said seller's inter-agents, said selected item being one  
of a group of individual product items and individual service items, and

said at least one of a plurality of seller's inter-agents for receiving information  
regarding said selected item from said buyer's inter-agent and for sending information  
regarding said selected item to said buyer's inter-agent,

wherein, when said buyer's inter-agent transmits a set of minimally acceptable  
buyer's specifications for said selected item to said plurality of seller's inter-agents,  
said at least one of said plurality of seller's inter-agents transmits to said buyer's inter-



1 agent a set of seller's specifications available from a seller for said selected item that  
2 comply with said set of minimally acceptable buyer's specifications.

1 32. The system of claim 31, wherein:

2 said at least one of a plurality of seller's inter-agents comprises at least two  
3 seller's intelligent agents.

1 33. A method for information collaboration between a buyer and at least one of a  
2 plurality of sellers using computers that communicate over a distributed network,  
3 the method comprising:

4 transmitting from a buyer's intelligent negotiation agent a set of minimally  
5 acceptable buyer's specifications for a selected item to a plurality of seller's intelligent  
6 negotiation agents, said selected item being one of a group of individual product items  
7 and individual service items, and

8 transmitting from at least one of said plurality of seller's intelligent negotiation  
9 agents to said buyer's intelligent negotiation agent a set of seller's specifications  
10 available from a seller for said selected item, said seller's specifications in compliance  
11 with said set of minimally acceptable buyer's specifications.

1 34. The method of claim 33, wherein:

2 said at least one of a plurality of seller's intelligent negotiation agents comprises  
3 at least two seller's intelligent negotiation agents.

1 35. A method for exchanging information between a buyer and at least one of a  
2 plurality of sellers using computers that communicate over a distributed network,  
3 the method comprising:  
4 transmitting from a buyer's input device to a buyer's intelligent negotiation agent  
5 a list of at least two sellers of a selected item, said selected item being one of a group  
6 of individual product items and individual service items, and  
7 exchanging information regarding said selected item between said buyer's  
8 intelligent negotiation agent and at least one of a plurality of seller's intelligent  
9 negotiation agents.

10 36. The method of claim 35, wherein:  
11 said at least one of a plurality of seller's intelligent negotiation agents comprises  
12 at least two seller's intelligent negotiation agents.

13 37. The method of claim 35, further comprising:  
14 transmitting from said buyer's intelligent negotiation agent to said seller's  
15 intelligent negotiation agent a list of buyer's minimally acceptable specifications for said  
16 selected item, and  
17 transmitting from said seller's intelligent agents to said buyer's inter-agent  
18 stating the availability from said sellers of said selected item conforming to said buyer's  
19 minimally acceptable specifications, said sellers each represented by one of said

1 seller's intelligent agents.

1 38. The method of claim 37, wherein:

2 said at least one selected item comprises a bundle of items, and

3 each of said at least two sellers is a seller of each of said items of said bundle.

1 39. The method of claim 35, wherein:

2 said at least one selected item comprises a bundle of items, each of item of said  
3 bundle of items is available from each of said at least two sellers, and each of said  
4 items of said bundle satisfies a list of buyer's minimally acceptable specifications.

1 40. The method of claim 35, wherein:

2 said information regarding said selected item for exchange between said buyer's  
3 intelligent negotiation agent and said seller's intelligent negotiation agents comprises at  
4 least one promotion from at least one of said sellers.

1 41. The method of claim 35, wherein:

2 said information regarding said selected item for exchange between said buyer's  
3 intelligent negotiation agent and said seller's intelligent negotiation agents comprises at  
4 least one contract contingency from at least one of said sellers authorizing that seller to  
5 pay said buyer a penalty if that seller elects to sell said selected item to another buyer.

1 42. The method of claim 35, wherein:

2 said buyer's inter-agent selects one of a group of evolutionary computation  
3 programs to exchange said information.

1 43. The method of claim 35, wherein:

2 said seller's intelligent agent selects one of a group of evolutionary computation  
3 programs to exchange said information.

1 44. The method of claim 35, further comprising:

2 transmitting to a buyer's analytical agent a set of parameters relating to said  
3 selected item,

4 said buyer's analytical agent mining data from at least one of a plurality of  
5 market databases,

6 said buyer's analytical agent identifying said list of at least two sellers of said  
7 selected item, and

8 transmitting from said buyer's analytical agent to said buyer's intelligent  
9 negotiation agent said list of at least two sellers.

1 45. The method of claim 44, further comprising:

2 said buyer's analytical agent ranking said identified sellers according to  
3 satisfaction criteria related to said set of parameters.

1 46. The method of claim 44, further comprising:

2 said buyer's analytical agent selecting one of a group of evolutionary  
3 computation programs to perform said mining data.

1 47. The method of claim 44, further comprising:

2 said buyer's analytical agent identifying at least one new item from said plurality  
3 of market databases, each said at least one new item similar to said selected item, and  
4 ranking each said new item by interest to customers similar to a buyer  
5 associated with said buyer's intelligent negotiation agent.

1 48. A method for information collaboration between a buyer and at least one of a  
2 plurality of sellers using computers that communicate over a distributed network,  
3 the method comprising:

4 transmitting from a buyer's inter-agent to a plurality of seller's intelligent  
5 negotiation agents a set of minimally acceptable buyer's specifications for a selected  
6 item, said selected item one of a group of individual product items and individual  
7 service items,

8 at least one of a plurality of sellers' inter-agents transmitting to said buyer's  
9 inter-agent a set of seller's specifications for items available from the seller, said set of  
10 seller's specifications in compliance with said set of minimally acceptable buyer's  
11 specifications,

12 said buyer's inter-agent transmitting a set of minimally acceptable buyer's

1 transaction specifications for said selected item to said plurality of sellers' inter-agents,  
2 and

3 transmitting from at least one of said plurality of sellers' inter-agents transmits to  
4 said buyer's inter-agent a set of seller's transaction specifications available from a  
5 seller for said selected item, said set of seller's transaction specifications in compliance  
6 with said set of minimally acceptable buyer's transaction specifications.

49. A computer program product comprising a machine readable medium on which  
is provided program instructions for performing a method for information  
collaboration between a buyer and at least one of a plurality of sellers using  
computers that communicate over a network, the program instructions  
comprising:

program code for transmitting from a buyer's intelligent negotiation agent a set of  
minimally acceptable buyer's specifications for a selected item to a plurality of seller's  
intelligent negotiation agents, said selected item being one of a group of individual  
product items and individual service items, and

program code for transmitting from at least one of said plurality of seller's  
intelligent negotiation agents to said buyer's intelligent negotiation agent a set of  
seller's specifications available from a seller for said selected item, said seller's  
specifications in compliance with said set of minimally acceptable buyer's  
specifications.

1 50. The system of claim 5, further comprising:  
2 a plurality of market databases registered with a cooperative communications  
3 network,  
4 an analytical agent for mining data related to a selected item from at least one of  
5 said plurality of market databases, said analytical agent further for generating a subset  
6 of data that most closely meets a preprogrammed goal,  
7 at least one of a seller's inter-agents in communication with said analytical agent  
8 for receiving said subset of data,  
9 said at least one of a seller's inter-agents for generating at least one showcase  
10 database based on said subset of data responsive to a set of seller's sales objectives,  
11 each showcase registered with a cooperative communications network, and  
12 a user interface for displaying information derived from said showcase database.

1 51. The system of claim 50, wherein:  
2 said at least one showcase database comprising said list of buyer's minimally  
3 acceptable specifications.

1 52. A system for information collaboration between a buyer and at least one of a  
2 plurality of sellers using computers that communicate over a distributed network,  
3 the system comprising:  
4 a buyer's inter-agent for receiving information regarding at least one selected  
5 item from at least one of a plurality of seller's inter-agents and for sending information

6 regarding said selected item to said seller's inter-agents, said selected item being one  
7 of a product or service, and

8 said at least one of a plurality of seller's inter-agents for receiving information  
9 regarding said selected item from said buyer's inter-agent and for sending information  
10 regarding said selected item to said buyer's inter-agent,

11 wherein, when said buyer's inter-agent transmits a set of minimally acceptable  
12 buyer's specifications for said selected item to said plurality of seller's inter-agents,  
13 said at least one of said plurality of seller's inter-agents transmits to said buyer's inter-  
14 agent a set of seller's specifications available from a seller for said selected item that  
15 comply with said set of minimally acceptable buyer's specifications.

53. The system of claim 52, wherein:

when said at least one of said plurality of seller's inter-agents transmits to said  
3 buyer's inter-agent a set of seller's specifications responsive to said set of minimally  
4 acceptable buyer's specifications, said buyer's inter-agent compares each of said  
5 seller's specifications against said set of minimally acceptable buyer's specifications,  
6 and selects an optimal set of new buyer's specifications in view of a preprogrammed  
7 buyer strategy.